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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,710

04/21/2006

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P29755

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7055 7590 06/12/2008
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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2889

NOTIFICATION DATE

DELIVERY MODE

06/12/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/576,710	Applicant(s) KAKEHASHI ET AL.	
	Examiner Kevin Quarterman	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1-12 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>0706</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following title is suggested: --COIL ASSEMBLY BODY STRUCTURE FOR ELECTRODELESS DISCHARGE LAMP--.

Claim Objections

3. Claims 1-12 and 14 are objected to because of the following informalities:
Independent claim 1 recites "the bulb" in line 5 of the claim. It appears that this recitation should be replaced with "the airtight container bulb" for consistency in claim terminology. Independent claim 1 also recites "the cylinder" in lines 10, 11, and 13 of the claim. It appears that this recitation should be replaced with "the pipe-shaped cylinder" for consistency in claim terminology. Independent claim 1 also recites "the bobbin" in line 13 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology.
4. Claim 2 recites "the bobbin" in lines 3 and 5 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology. Claim 2 also recites "the cavity" in line 3 of the claim. It appears that this recitation should be replaced with "the hollow portion" for consistency in claim terminology. Claim 2 also recites "the upper collar" in lines 6-7 and 8 of the claim. It appears that this recitation should be replaced with "the substantially doughnut-shaped upper collar" for consistency in claim terminology. Claim 2 also recites "the lower collar"

in line 9 of the claim. It appears that this recitation should be replaced with "the cylindrical lower collar" for consistency in claim terminology.

5. Claim 3 recites "the bobbin" in line 2 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology. Claim 3 also recites "the coupler" in line 3 of the claim. It appears that this recitation should be replaced with "the coil assembly body" for consistency in claim terminology.

6. Claim 4 recites "the lower collar" in line 2 of the claim. It appears that this recitation should be replaced with "the cylindrical lower collar" for consistency in claim terminology. Claim 4 also recites "the bobbin" in line 2 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology. It also appears that the wrong form of "contained" is used in line 4 of the claim.

7. Claim 5 recites "the bobbin" in lines 2-3 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology.

8. Claim 6 recites "the bobbin" in line 2 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology.

9. Claim 7 recites "the bobbin" in line 4 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology.

10. Claim 8 recites “the bobbin” in line 2 of the claim. It appears that this recitation should be replaced with “the skeleton-shaped bobbin” for consistency in claim terminology.

11. Claim 9 recites “the bulb” in lines 2 and 4 of the claim. It appears that this recitation should be replaced with “the airtight container bulb” for consistency in claim terminology. Claim 9 also recites “the cavity” in lines 2 and 4 of the claim. It appears that this recitation should be replaced with “the hollow portion” for consistency in claim terminology. Claim 9 also recites “the bobbin” in line 5 of the claim. It appears that this recitation should be replaced with “the skeleton-shaped bobbin” for consistency in claim terminology.

12. Claim 10 recites “the bobbin” in lines 2-3 of the claim. It appears that this recitation should be replaced with “the skeleton-shaped bobbin” for consistency in claim terminology. Claim 10 also recites “the cylinder” in line 3 of the claim. It appears that this recitation should be replaced with “the pipe-shaped cylinder” for consistency in claim terminology. Claim 10 also recites “the windows” in line 4 of the claim. It appears that this recitation should be replaced with “the notch windows” for consistency in claim terminology. It also appears that the term “width” is missing from line 4 following “respective” in the claim.

13. Claim 11 recites “the bobbin” in line 2 of the claim. It appears that this recitation should be replaced with “the skeleton-shaped bobbin” for consistency in claim terminology. It also appears that one of the “insertion directions” recited in line 7 of the claim should be replaced with “a pulling-out direction”.

14. Claim 12 recites "the bobbin" in line 2 of the claim. It appears that this recitation should be replaced with "the skeleton-shaped bobbin" for consistency in claim terminology. Claim 12 also recites "the bulb" in line 5 of the claim. It appears that this recitation should be replaced with "the airtight container bulb" for consistency in claim terminology.

15. Claim 14 recites "the cylinder" in line 2 of the claim. It appears that this recitation should be replaced with "the pipe-shaped cylinder" for consistency in claim terminology.

16. Appropriate correction is required.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kenji (JP 2003-257379), which is included in applicant IDS submitted 26 July 2006.

19. Regarding independent claim 1, Figures 3 and 6 of Kenji shows an electrodeless discharge lamp comprising an airtight container bulb (10) made of a transparent material and enclosing a discharge gas; and a coil assembly body contained in a hollow portion in the airtight container bulb for generating a high frequency electromagnetic field by conducting a high frequency current in a coil to excite the discharge gas so as to emit light, wherein the coil assembly body comprises a pipe-shaped cylinder (35) formed of a thermal conductor for heat release; a skeleton-shaped bobbin (20) mounted

on an outer surface of the pipe-shaped cylinder along an axial direction of the pipe-shaped cylinder; a core (35) made of a soft magnetic material provided at an opening formed by the skeleton of the skeleton-shaped bobbin and being in substantial surface contact with the pipe-shaped cylinder; and a coil (36) wound around a surface of the skeleton-shaped bobbin and the core.

20. Regarding claim 2, Kenji discloses the skeleton-shaped bobbin of the coil assembly body being made of resin, wherein when referring to a part of the skeleton-shaped bobbin positioned back in the hollow portion as a bobbin upper part, and referring to its part positioned at an opening portion of the hollow portion as a bobbin lower part, the skeleton-shaped bobbin comprises: a substantially doughnut-shaped upper collar (21); at least two pillar portions extending in a direction from this substantially doughnut-shaped collar to the bobbin lower part; and a cylindrical lower collar (22) supporting these pillar portions and extending to be the bobbin lower part, in the substantially doughnut-shaped upper collar, the pillar portions, and the cylindrical lower collar support the core and the coil.

21. Regarding claim 3, Figure 3 of Kenji shows at least one of the collars of the skeleton-shaped bobbin protrudes further than a thickness of the core, or protrudes further than a maximum diameter of the coil, in a radial direction of the coil assembly body.

22. Regarding claim 4, Figure 4 of Kenji shows the pillar portions and the cylindrical lower collar of the skeleton-shaped bobbin partially provided with a groove (228) formed to contain a lead line of the coil.

23. Regarding claim 5, Figure 4 of Kenji shows the groove having a rib formed on an inner wall thereof.

24. Regarding claim 6, Figure 4 of Kenji shows the groove formed in the skeleton-shaped bobbin partially provided with a notch (222).

25. Regarding claim 7, Figure 4 of Kenji shows an insulating tape wrapped around a periphery of the core, and the coil is wound thereon, while one of a conical and an angular prismatic rib is formed on a pillar portion of the skeleton-shaped bobbin adjacent to the groove at a beginning of the winding of the coil.

26. Regarding claim 8, Figure 4 of Kenji shows a step formed on a pillar portion of the skeleton-shaped bobbin between length dimensions of walls forming the groove of the pillar portion.

27. Regarding claim 9, Figure 6 of Kenji shows the airtight container bulb having an air exhausting pipe (14) in the hollow portion, and a projection having a slope formed at the substantially doughnut-shaped upper collar of the skeleton-shaped bobbin.

28. Regarding claim 10, Figure 4 of Kenji shows the notch windows formed on a cylindrical surface of the lower collar of the skeleton-shaped bobbin, while convex portions are formed at corresponding positions of the pipe-shaped cylinder, in which the notch windows and the convex portions are formed in pairs, and their respective widths are different.

29. Regarding claim 11, Kenji discloses the lower collar of the skeleton-shaped bobbin having a terminal box provided on a cylindrical outer periphery thereof, terminals being inserted into and from the terminal box so as to connect the lead line of the coil to

a lamp cable; and a pull-out direction of the lamp cable is opposite to an insertion direction of the lamp cable.

30. Regarding claim 12, Figure 3 of Kenji shows the skeleton-shaped bobbin provided with a base receiver (32) which passes therethrough and is mounted thereon, and this base receiver has a hole formed on an upper surface thereof.

31. Regarding claim 13, Kenji discloses the core being formed of a ferrite core divided left and right, and having flat portions on a rear thereof.

32. Regarding claim 14, Figure 6 of Kenji shows the core protruding upward further than the pipe-shaped cylinder at an upper part of the coil assembly body.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Anami (US 6,605,889) discloses an electrodeless low pressure lamp with multiple ferrite cores and coils. Michiels (US 5,912,536) discloses an electrodeless low-pressure discharge lamp. Cocoma (US 5,783,912) discloses an electrodeless fluorescent lamp with feedthrough. Borowiec (US 5,760,547) discloses a multiple-discharge electrodeless fluorescent lamp. Roelevink (US 5,723,941) discloses a lighting unit. Inoue (US 5,637,963) discloses an electrodeless lamp with narrow gap between tube and arc chamber. Roberts (US 5,461,284) discloses a fixture between electrodeless lamp and metallic fixture. Scott (US 5,412,280) discloses an electrodeless lamp with external coating. Vermeulen (US 5,336,971) discloses an electrodeless low-pressure sodium vapor discharge lamp. Eggink (US 5,291,091) discloses an electrodeless low-pressure discharge lamp. Kores (US 4,927,217)

discloses an electrodeless low-pressure discharge lamp. Houkes (US 4,568,859)
discloses a discharge lamp with interference shielding.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571)272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner
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10 June 2008